

VOIP SOLUTIONS PRESENTS
ELI
EMERGENCY LOCATION
INFORMER

ENHANCED 9-1-1 FOR VOIP
FCC AND HOMELAND SECURITY &
PUBLIC SAFETY

APRIL 11, 2012

Agenda

- Objective
- VoIP Solutions Introduction
- FCC's Challenge
- Emergency Services Number: 9-1-1
 - ***"When seconds count"***
- Emergency Location Informer (ELI)
 - Overview & demonstration
- Telecommunications industry changes
- ELI 9-1-1 Stakeholders' benefits
- ELI : in step with the times
- Discussion and next steps

VoIP Solutions

- Goal: To provide a 9-1-1 system that will provide access and Enhanced 9-1-1 for VoIP products as the 9-1-1 infrastructure migrates from legacy through Next Generation 9-1-1.
- VoIPS Team
 - Peter Woodford
 - Eamonn Oldham, P. Eng.
 - Larry Hicks

FCC : the challenge

"The unfortunate truth is that the capability of our emergency response communications has not kept pace with commercial innovation -- has not kept pace with what ordinary people now do every day with communications devices".

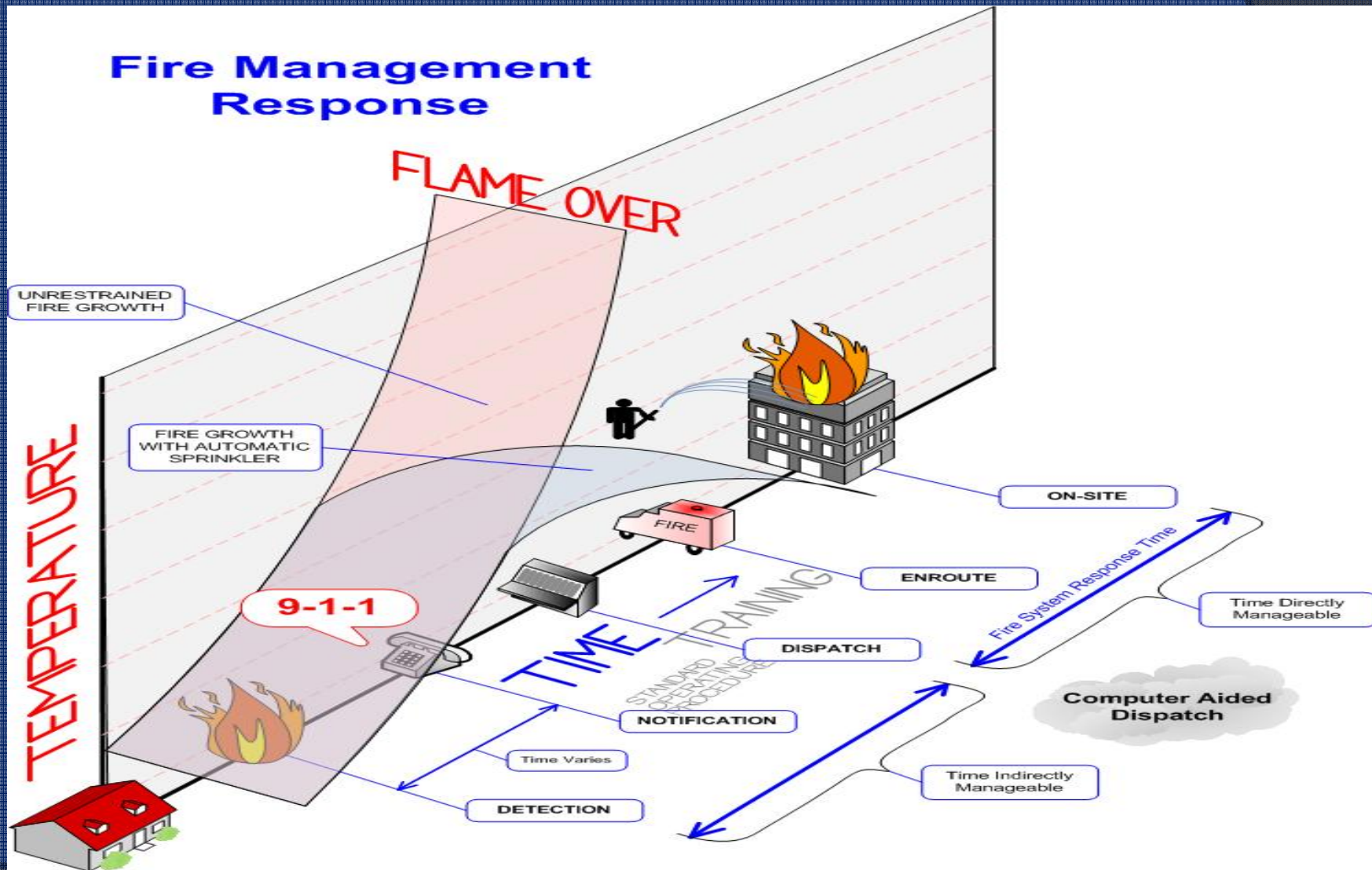
FCC Chairman Julius Genachowski, August 2011

- Regulating global supply chain
 - Example: Link2VoIP: inbound and outbound
"We are not obligated under any FCC/CRTC law because our corporation, Link2VoIP, is headquartered in Panama."
- Managing transition to NG 9-1-1
 - NG 9-1-1 incomplete, yet VoIP 9-1-1 need growing
 - Legacy & NG 9-1-1 compatibility
- 9-1-1 funding

FCC : the challenge

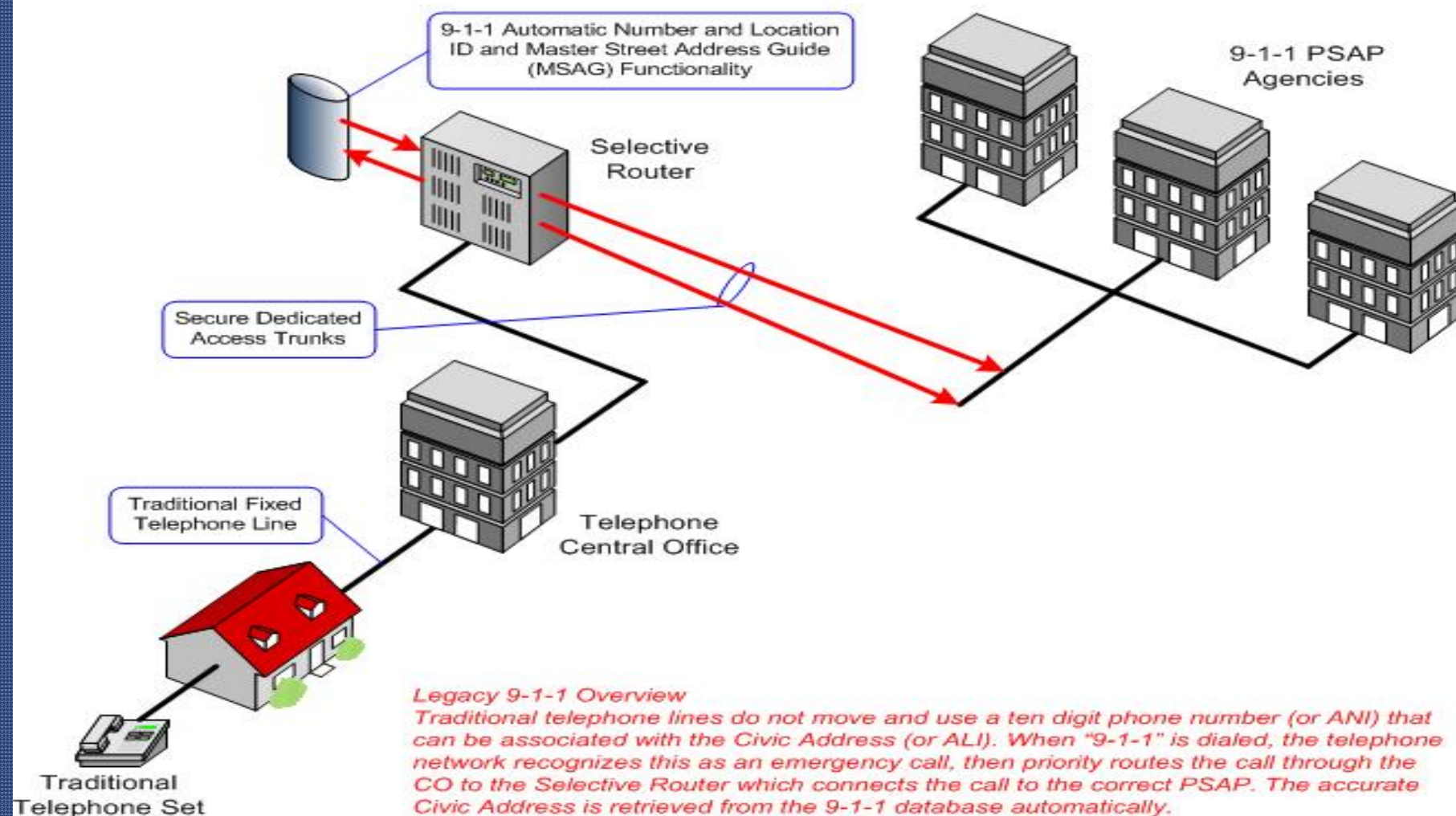
- GN Docket No 11-117/PSNo 07-114/WC No 05-196. *FCC seeking location improvements for :*
 - *VoIP*
 - *WiFi*
 - *Indoor cellular*

FCC : the challenge

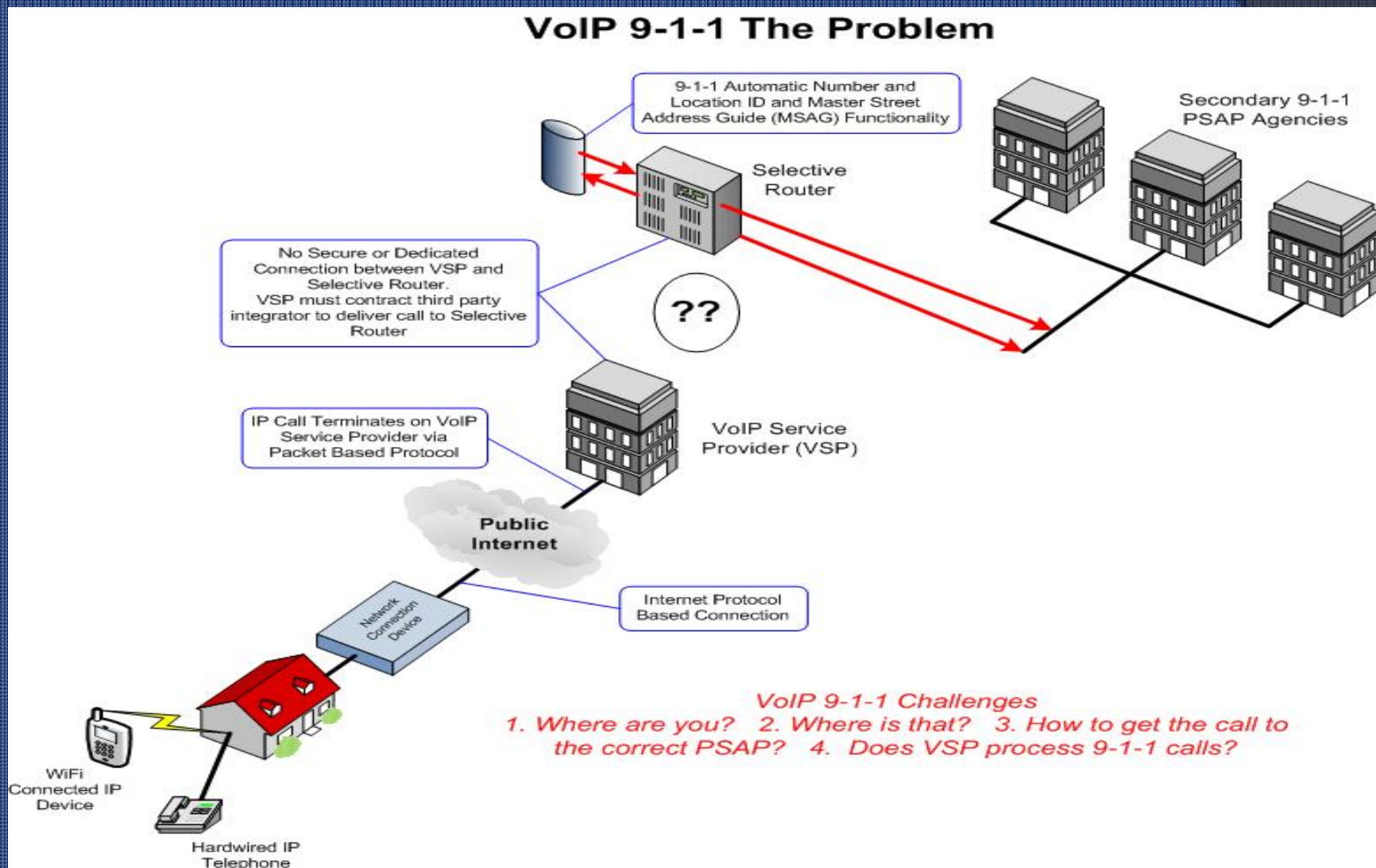


PSTN E9-1-1 System

Legacy 9-1-1 Overview

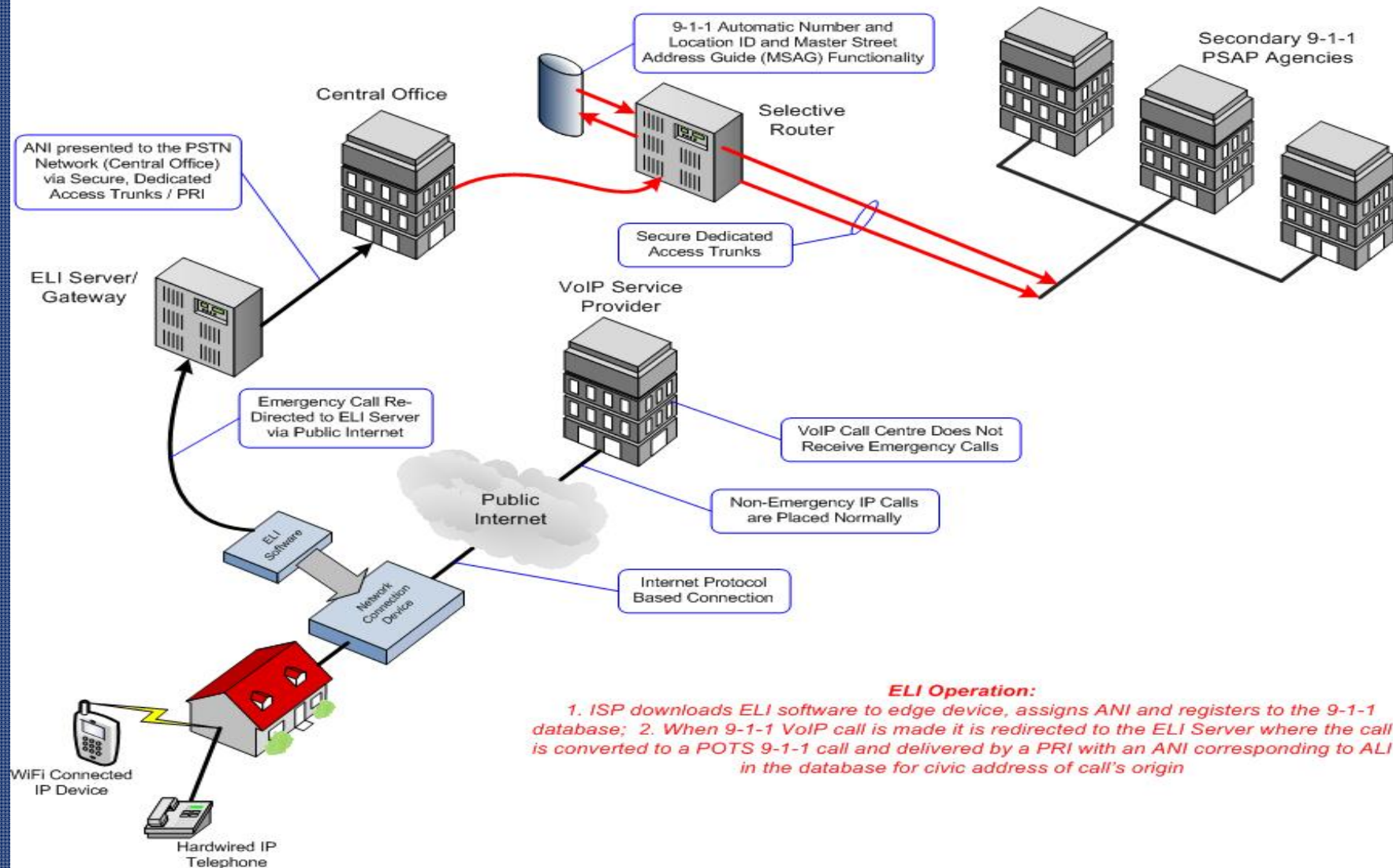


VoIP 9-1-1 Service: The Problem



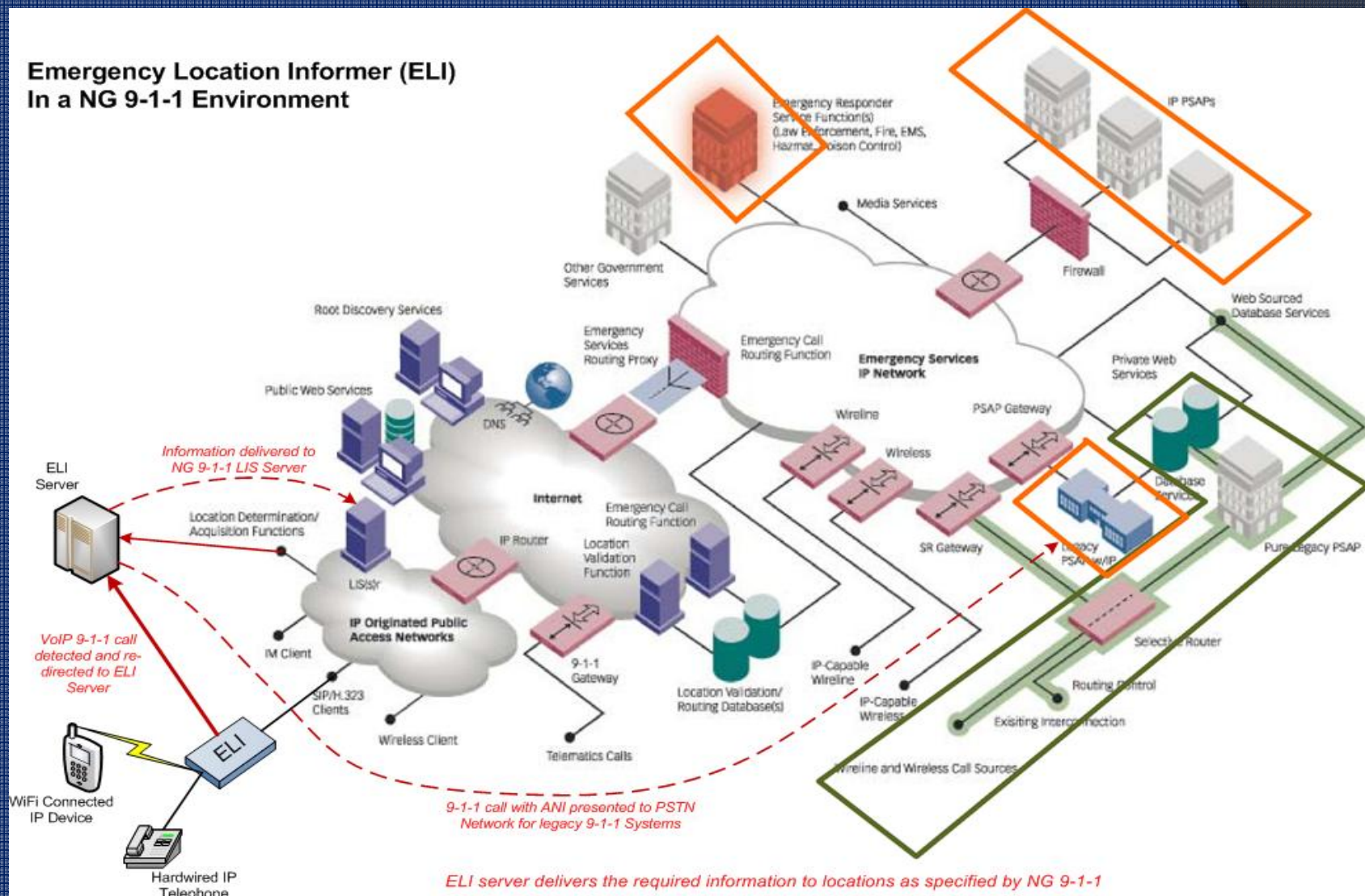
VoIPS' *ELI* Methodology

ELI (ISP Based Methodology) Enhanced 9-1-1 for VoIP

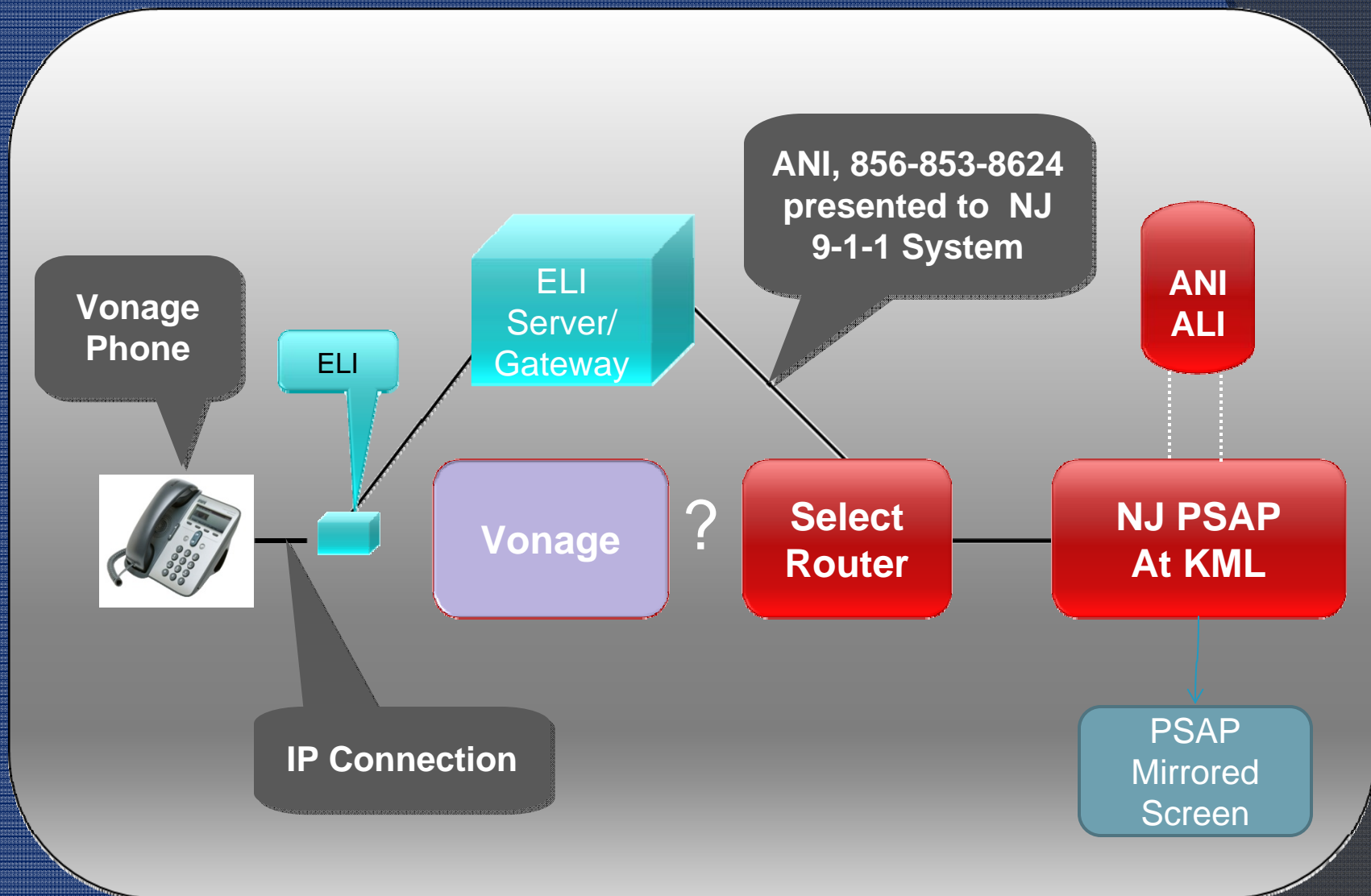


ELI & Next Generation 9-1-1

Emergency Location Informer (ELI) In a NG 9-1-1 Environment



VoIP Solutions *ELI* Demo Setup



Telecom Space: Accelerating Change

➤ New Carrier Model

- “Smart” edge devices

➤ Transition to IP Communications

- Decrease in traditional telephony
- VoIP
- WiFi
- Smartphones, Tablets and other WiFi devices

VoIP usage and growth in US

- Skype/Microsoft, Google, Dell
 - Technology companies expansion into telecom
- Carriers offload to WiFi
 - UMA/WiFi on cell: VoIP
 - *“GSM Association & WiFi Alliance announces partnership with WBA to create unified roaming and authentication framework for hotspots and 3G/4G”.*
World Mobile Congress 2012
- Fibre

Example: Microsoft purchase Skype

- Microsoft & Skype:
 - Next Generation Communications
 - Voice, video, data and texting
 - 800 M clients, 600,000 new/day
 - Link all technology
 - PS2; home entertainment, mobile and computing
- ***“Skype has changed communications habits ... making a physical phone more of a necessity for emergencies than a device “to reach out and touch someone.”***

Amber MacArthur Globe & Mail May 11, 2011

ELI: in step with the times

- Legacy through Next Generation 9-1-1
 - NENA, EENA, CRTC
 - NENA i3 08-003
- Changing telecommunications landscape
 - Emerging communications players
 - WiFi and cellular offload
 - Smartphone and Tablet growth
 - Technology and infrastructure telecom players

ELI: now and into the future

- Complementary
 - Legacy and Next Generation 9-1-1
 - Ng 9-1-1- i3 08-003
 - Cellular
 - Indoor cellular - WiFi
 - WiFi
- ***ELI*** enables regulatory & legal control
- ***ELI*** is VSP & ISP agnostic

ELI: Business Case

- 9-1-1 funding challenge

“The biggest obstacles for NG 9-1-1 deployment are funding and how you deploy it,” Roger Hixon, NENA Technical Issues Director

- Next Generation 9-1-1 pressure

- NG9-1-1 equipment expense

- Requirement to operate legacy and NG 9-1-1 systems

ELI providing a technical solution and a long term 9-1-1 funding model!

ELI: Business Case

- *9-1-1 fee per internet connection*
 - *Suggested fee \$2/month*
 - *Fee Breakdown*
 - *\$0.50 State or Municipality*
 - *\$0.50 Internet Service Provider*
 - *\$1 Network management & maintenance*

Provides for a long term 9-1-1 funding model for all participating 9-1-1 stakeholders!

ELI 9-1-1 Stakeholder's Benefits

- **Consumers**
- **Regulatory – FCC**
 - Manageable and controllable model
- **Internet Service Providers**
 - VoIP & ISP agnostic
- **States/Municipalities**
 - Protection of 9-1-1 assets
 - 9-1-1 Funding
 - Solution that can be managed and regulated
 - 9-1-1 Technical Solution
 - Maintain 9-1-1 service levels

All stakeholders benefit through ELI implementation!

US *ELI* implementation

- Security
 - *ELI* is “nested”
 - RG, VSP stream, ELI Servers
- *ELI* Edge Device Software
 - ISP deployed with address validation
- *ELI* Server Network
 - Enhanced redundancy & flexible design
 - Controllable
- Management
 - VoIP E9-1-1 Control, Management and Testing

US Benefits from *ELI*

- Public Safety E9-1-1 technology solution
- Deployment: Minimal Government Resources
- Protects 9-1-1 infrastructure & processes
- Long term 9-1-1 funding model
- Maintains expected levels of 9-1-1 reliability now and during transition to NG 9-1-1.
- Opportunity: Leadership in 9-1-1
 - First complete E9-1-1 system
 - Legacy, NG 9-1-1, VoIP, WiFi and Cellular

ELI Summary

- Manageable & easily regulated
- Tested, implementable technology
- Immediate & NG 9-1-1 solution
- Long term 9-1-1 funding model
- Significant US & State/Muni benefits

ELI ensures help arrives when you need it most!

FCC Next Steps: *Time is of the essence*

- Definition of success
- Process
- Participants
- Timelines
- Other?

“We are working to be of great help to you and your business because we see so much value in the opportunity you have presented us with. Please know that I consider the opportunity significantly beneficial to the future of public safety...”

Debbie Wagner
CEO
KML Technologies

VoIP Solutions ELI Technology

Questions?

Thank You